



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D6101-013
Job Sheet 170396



5038652

Part No: D6101-013 ✓

Job Qty: 16 ea ✓

Part Name: Saddle Billet



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/16/18

Job Tracking No:

Due Date: 2/6/18

Created By: Diane Baker

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	16 pcs		2/6/18	0.00	0.00	Purchasing		DAS
110	Packaging	16 pcs		2/6/18	0.00	0.00	Packaging2		11
120	QC	16 pcs		2/6/18	0.00	0.00	QC6		10 18/02/03
130	Packaging	16 pcs		2/6/18	0.00	0.00	Packaging3-2		SBL 18/02/04
140	QC21-SA	16 Ea		2/6/18	0.00	0.00	QC21		MLS FEB 05 2018

Part Op 100 - Issue P/O: 38795 b) 10.100" x 8.250" x 2.50" thick (+0.030 / -0.000) d) Grain direction along 10.100"
Descriptions: length

110 - Ensure material certification is attached

120 - Ensure Material certification comply to Dwg D6101

130 - LOCATION: MAT044

JAN 16 2017

Job Allocations

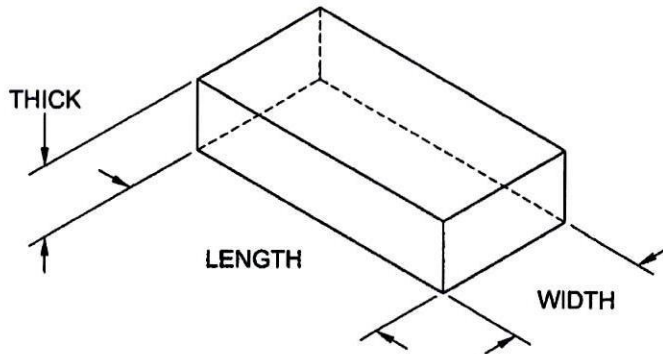
Operation	Component Part	Required	Inventory	Allocated	Std Qty
100-Purchasing	D6101-013P	16	0	0	0

Part Specifications

Specifications could not be found.

Plex 1/16/18 9:13 AM dart.baker.diane

SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D6101	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 06101-013
 DATE: FEB 03 2018

PO BATCH NO: 038795/5038652

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 16 pcs
 QUANTITY INSPECTED: 16 pcs
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.500
 THICKNESS RECEIVED: 2.500
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	☒ N	
CORRECT FINISH	☒ Y	☐ N	
CORROSION	Y	☒ N	
CORRECT GRAIN DIRECTION	☒ Y	☐ N	
CORRECT MATERIAL PER M-DRAWING	☒ Y	☐ N	AMS-QQ-A 250
CORRECT THICKNESS	☒ Y	☐ N	
PHOTO REQUIRED	☒ Y	☒ N	
CORRECT REF # TO LINK CERT	☒ Y	☐ N	Heat # 233193B2-228814BC
CORRECT MATERIAL IDENTIFICATION	☒ Y	☐ N	
CORRECT M# ON THE MATERIAL	☒ Y	☐ N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	☒ N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-89 FEB 03 2018</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in.

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3501047

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 01-FEB-18	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 3501047-2	

Shipment Details	Final Destination Branch - TOR
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Order No	Line No	Item No	Description	
5017092	1	752241.MO	2.5000.PL 7075.T7351.ALUMINUM.501.48.5000.144.5000 CUT 2SIDED TO 8.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 10.1")) X 10.1 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 10.1")) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12 Email P/s and certs to: clavoie@dartaero.com	
Purchase Order No		Part Number	Ordered Qty	Invoice Qty
38795		YOUR ITEM NUMBER: D6101-013	16.00 PCS	16.00 PCS

Details	ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS
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Delivery No.	Mill/Source	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
121568630	KAISER ALUMINUM	 233193821		2			43.0890
121568630	KAISER ALUMINUM	 228814801		2			43.0890

Date Printed: 01-FEB-2018 03:28:11 PM



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

121568630	KAISER ALUMINUM	 2 3 4 8 8 1 B 1		12			258.5342
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We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A. M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer, cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

FEB 01 2018



SHIP TO:

A M CASTLE METALS
4175 ROYAL DRIVE, SUITE 600
KENNESAW, GA 30144

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

SOLD TO:

AM CASTLE & CO- SOLD TO
1420 KENSINGTON RD
SUITE 220
OAK BROOK, IL 60523

CERTIFIED TEST REPORT

Serial Number

4472914



CUSTOMER PO NUMBER: 429646-1		WORK PACKAGE:	CUSTOMER PART NUMBER: 752241		SHIP RUN/LOAD: 104003/13	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1239798-1		SHIP DATE: 7-AUG-2017	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: KaiserSelect Plate	
WEIGHT SHIPPED: 7224 LB	QUANTITY: 4 PCS EST.	TRUCK B/L #: 2068295	GAUGE: 2.5000 IN (63.5000 MM)	DIAMETER/WIDTH: 48.500 IN (1231.9 MM)		LENGTH: 144.500 IN (3670.3 MM)	

MHU 2131840: LOT 233193B2: 1 pieces;

MHU 2136198: LOT 228814B0: 2 pieces;

MHU 2136199: LOT 228814B0: 1 pieces;

Certified Specifications

AMS 4078/RevJ
ASTM B 209/Rev14
BSS 7055/RevB
DPS 4.713/RevAK
GSS16100/RevG/Amd1
PS 21211/RevP

AMS-QQ-A-250/12/RevA
ASTM B 594/Rev13
CMMP 025/RevV
EAC MS1011/RevE
MMS 159/RevT

AMS-STD-2154/RevC
BAC 5439/RevJ
CSTI 006/RevE
GAMPS 9101/RevB/AmdSCN1
PPS 20.04/Rev7

Test Code: 4297

Lot: 228814B0

Cast 487

Drop 19

Test Results

Ingot 4

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min;Max)	71.4 : 74.1 (492 : 511)	59.7 : 62.6 (412 : 432)	10.4 : 12.3

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	39.2 Min	39.7 Max
(MS/M) :	22.7 Min	23.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt %)	0.06	0.14	1.6	0.01	2.7	0.20	5.8	0.02	0.01	0.01	TOT 0.05

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4472914

Lot: 233193B2 Cast 487 Drop 40 Ingot 3 Melted in USA

(ASTM B8557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	69.5 : 69.8 (479 : 481)	58.4 : 58.5 (403 : 403)	10.6 : 11.1

(ASTM E1004)
(EN 2004-1)

Conductivity %IACS :	40.9 Min	41.2 Max
(MS/M) :	23.7 Min	23.9 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.09	0.18	1.5	0.03	2.4	0.19	5.6	0.03	0.01	0.02	TOT 0.06

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-15413B R 6

TEST NOTES

Metal represented by this test report was 100% Type I
(immersion) ultrasonically tested from one side with 3mm
dead zones top and bottom and meets the Class A and Class B
requirements of all specifications referenced on this test
report. No surface marking of sonic indications is
performed.

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order

* has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.

All test equipment and measuring devices are calibrated and certified in accordance with applicable specifications. For material thicknesses outside specification limits, mechanical properties are

as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.

* was melted in the United States of America or a qualifying country per DFARS 225.872-1(e), was manufactured in the United States of America, and meets the requirements of DFARS 252.225-10

domestic content.

* has been thermally processed in compliance with AMS 2772, where applicable.

* is mercury free, within the limits of detection of ASTM E1215 (≤ 1ppm).

* is in compliance with RoHS 2, European Union Directive 2011/65/EU.

* is in compliance with European Chemical Agency, ECHA, REACH regulations, IEC No 1907/2006, and Kaiser regularly monitors these regulations for updates.

* is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.

* is free of weld repair.

* meets the recording requirements of EN 10204, Type 3.1

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on this certificate may be punished as a felony under Federal law.



JAMES HEMENWAY, TECHNICAL PROCESS MANAGER

SHIP TO:

A M CASTLE METALS
4175 ROYAL DRIVE, SUITE 600
KENNESAW, GA 30144

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215

Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4472914



SOLD TO:

AM CASTLE & CO- SOLD TO
1420 KENSINGTON RD
SUITE 220
OAK BROOK, IL 60523

CUSTOMER PO NUMBER: 429646-1	WORK PACKAGE:	CUSTOMER PART NUMBER: 752241	SHIP RUN/LOAD: 104003/13	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1239798-1	SHIP DATE: 7-AUG-2017	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: KaiserSelect Plate
WEIGHT SHIPPED: 7224 LB	QUANTITY: 4 PCS EST.	TRUCK B/L #: 2068295	GAUGE: 2.5000 IN (63.5000 MM)	DIAMETER/WIDTH: 48.500 IN (1231.9 MM)	LENGTH: 144.500 IN (3670.3 MM)

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MHU 2136198: LOT 228814B0: 2 pieces;

MHU 2136199: LOT 228814B0: 1 pieces;

Certified Specifications

AMS 4078/RevJ
ASTM B 209/Rev14
BSS 7055/Rev8
DPS 4.713/RevAK
GSS16100/RevG/Amd1
PS 21211/RevP

AMS-QQ-A-250/12/RevA
ASTM B 594/Rev13
CMMP 025/RevV
EAC MS1011/RevE
MMS 159/RevT

AMS-STD-2154/RevC
BAC 5439/RevJ
CSTI 006/RevE
GAMPS 9101/RevB/AmdSCN1
PPS 20.04/Rev7

Test Code: 4297

Lot: 228814B0 Cast 487

Drop 19

Test Results

Ingot 4

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.4 : 74.1 (492 : 511)	59.7 : 62.6 (412 : 432)	10.4 : 12.3

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	39.2 Min	39.7 Max
(MS/M) :	22.7 Min	23.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.06	0.14	1.6	0.01	2.7	0.20	5.8	0.02	0.01	0.01	TOT 0.05

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4472914

Lot: 233193B2 Cast 487 Drop 40 Ingot 3 Melted In USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	69.5 : 69.8 (479 : 481)	58.4 : 58.5 (403 : 403)	10.6 : 11.1

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(EN 2004-1)

Conductivity %IACS :	40.9 Min	41.2 Max
(MS/M) :	23.7 Min	23.9 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.09	0.18	1.5	0.03	2.4	0.19	5.6	0.03	0.01	0.02	TOT 0.06

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-15413B R 6

TEST NOTES

Metal represented by this test report was 100% Type I
(Immersion) ultrasonically tested from one side with 3mm
dead zones top and bottom and meets the Class A and Class B
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performed.

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

- * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.
- * All test equipment and measuring devices are calibrated and certified in accordance with applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.
- * was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.
- * has been thermally processed in compliance with AMS 2772, where applicable.
- * is mercury free, within the limits of detection of ASTM E1215 (<1 ppm).
- * is in compliance with RoHS 2, European Union Directive 2011/65/EU.
- * is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.
- * is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.
- * is free of weld repair.
- * meets the recording requirements of EN 10204, Type 3.*

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JAMES HEMENWAY, TECHNICAL PROCESS MANAGER